

ABSTRACT OF THE DISCLOSURE

An ion shower system is disclosed and comprises a plasma source operable to generate source gas ions within a chamber. The plasma source further comprises a plurality of conductor segments and a plurality of capacitors, wherein the conductor segments are serially connected through the plurality of capacitors. The plasma source further comprises an antenna drive circuit coupled to the plurality of conductor segments that provides power to the conductor segments and capacitors at a predetermined frequency. The ion shower system also comprises a source gas inlet that provides a source gas to the chamber. The conductor segments, capacitors and antenna drive circuit cooperatively provide energy to charged particles in the chamber, thereby energizing the charged particles and generating a plasma comprising source gas ions and electrons within the chamber due to ionizing collisions between the energized charged particles and the source gas.